

**ABSTRACT OF THE INVENTION**

A system and method for verifying proper assembly of devices such as a vehicle that are constructed of two or more components assembled to one another. According to the method the device is placed within an inspection area of the inspection system and a two-dimensional image of the device or electronic data with a two-dimensional image of the device encoded within it is created through the use of inspection cameras aimed at the inspection area of the inspection system. Predetermined locating features of two or more of the components of the device are located within the two-dimensional image or the electronic data within which the two-dimensional image is encoded. Relative positions and/or relative orientations of these two or more components can thereafter be calculated and compared to preferred relative positions and/or relative orientations of the components. Thereafter the relative positions and/or relative orientations of these devices may be adjusted toward their preferred relative positions and/or relative orientations.